

REGULATORY CONCERNS WITH CCA TREATED WOOD

By
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INTRODUCTION

- Based on the research of Solo-Gabriele, Townsend, Ma and others, there are regulatory concerns about CCA treated wood in four areas:
 - In service impacts
 - Reuse
 - Combustion
 - Land Disposal

IN SERVICE

IMPACTS—SAWDUST

- CCA treated wood sawdust routinely fails TCLP
 - However CCA wood, used for its intended purpose is exempt from RCRA.
 - Does the exemption cover sawdust?
 - If sawdust is not exempted, who is regulated, and how?
 - ☐ Furniture and other wood product manufacturers
 - ☐ Building supply stores that cut wood for customers
 - ☐ contractors building decks at residences

IN SERVICE IMPACTS-SOIL CONTAMINATION

- CCA treated wood decks and boardwalks are causing arsenic contamination in the underlying soils
 - The average As soil concentration found under Florida decks was 29 mg/kg , well above the RCRA arsenic soil screening value and the state's clean soil criteria:
 - RCRA Soil Screening value: 0.4 mg/kg
 - Florida cleanup/residential: 0.8 mg/kg
 - Florida cleanup/industrial: 3.7 mg/kg
 - Florida cleanup/ leaching: 27.5 mg/kg

IN SERVICE IMPACTS-SOIL CONTAMINATION (cont.)

- Note that the soil leaching value is based on an MCL of 50 ug/l. EPA has recently announced its intention to lower the MCL to 10 ug/l.
- There are an estimated 30,000 acres of CCA treated wood decks and boardwalks in Florida
- What regulatory criteria, if any, apply to this situation?

REUSE--MULCH

- Construction and demolition debris wood is frequently ground up, dyed and sold as a decorative landscaping mulch. This wood can contain CCA treated wood.
- As little as 1% CCA treated wood in mulch will cause it to leach arsenic in excess of the current MCL of 50 ug/l.
- It is not lawful under current Florida regulations for permitted solid waste management facilities to make mulch from CCA treated wood,
- But weathered CCA wood is difficult to distinguish from non-treated wood. Also, some manufacturers of mulch are not regulated as solid waste facilities.

COMBUSTION—EMISSIONS

- Preliminary mass balance evaluation of CCA treated wood burned in industrial boilers suggests that a significant fraction of the arsenic in the wood cannot be accounted for in the ash and apparently escapes as both particulate and gaseous (arsine) emissions
 - What kinds of air pollution control equipment are needed to control arsenic emissions?
 - More research and analysis is needed, especially since burning CCA wood under controlled conditions—i.e. in a waste-to-energy plant or dedicated industrial boiler-- may be best long-term disposal strategy.

COMBUSTION—ASH

- Ash from the combustion of CCA treated wood contains thousands of parts per million of arsenic, is highly toxic and fails TCLP.
- However, ash from combustion of a wood mixture with as little as 6% CCA treated wood will also fail TCLP
- The average amount of CCA treated wood in the Florida wood waste stream is also currently about 6%, but will rise to 25-30% over the coming decades).

LAND DISPOSAL

- Both laboratory and field data indicate that CCA treated wood disposed of in landfills leaches arsenic well above the proposed new arsenic MCL of 10 ug/l.
- Generally, in Florida, construction and demolition debris is disposed of in unlined landfills, since C&D debris is “inert” and “non-polluting”.

LAND DISPOSAL

- Florida is currently evaluating whether CCA treated wood should be banned from unlined landfills, or whether C&D disposal sites should be lined.
- Such changes make sense but there are significant repercussions which have to be considered, such as closure of many sites, soaring disposal fees and increased illegal dumping

CCA to Non-CCA Conversion

- CCA to alternate preservatives
- For example, ACQ
- Florida developed conversion guidance
- One facility in Ocala has converted to ACQ
- ACQ product is on the market

Conversion Guidance

- Decontamination of equipment
- Decontamination of pad and ancillary equipment
- Existing soil and groundwater contamination to be addressed
- Facility-wide closure will occur at the final closing of plant operations

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